



Quality assessment and land cover services in a collaborative clouds environment

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WGISS #37

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Note: this work is the result of the CNES/Astrium joint initiative within the « Open Mobility » thread - Cloud Computing of the OGC OWS-10 Testbed

Features

Orthorectification of raw image

Assess quality of the orthorectified image in terms of geometrical accuracy

Compute Land Cover map from an orthorectified image

Key points

Client base processing chain workflow
between multiple clouds

Collaborative processing without raw data
acquisition transfert between clouds

WPS based on demand processing

Integration of Orfeo Toolbox library within
Constellation SDI

Airbus Defense and Space

Orfeo Toolbox

<http://orfeo-toolbox.org/otb/>

Constellation SDI

<http://www.constellation-sdi.org>

mapshup

<http://mapshup.info>

WPS

WPS

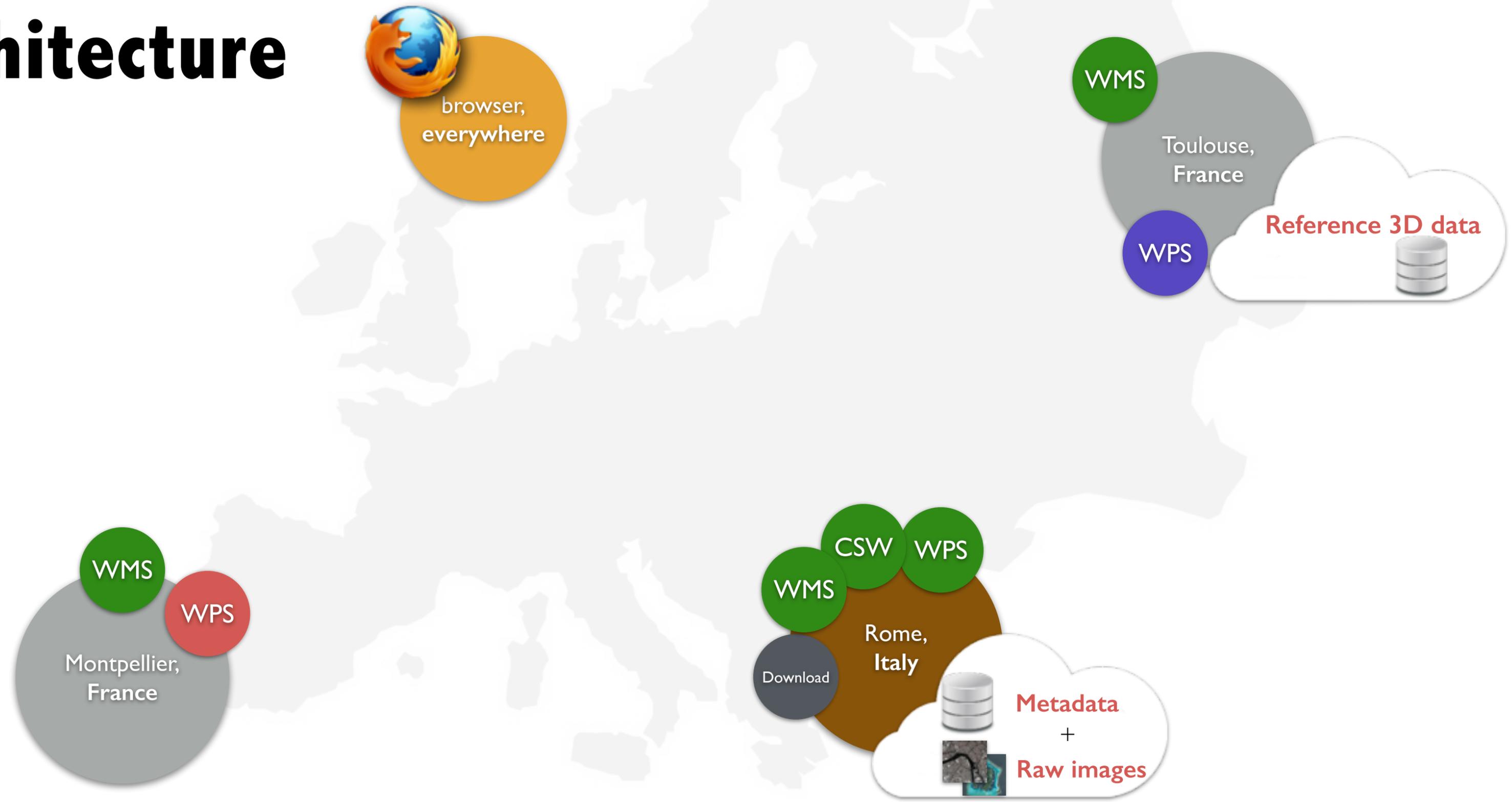
WPS

WMS

CSW

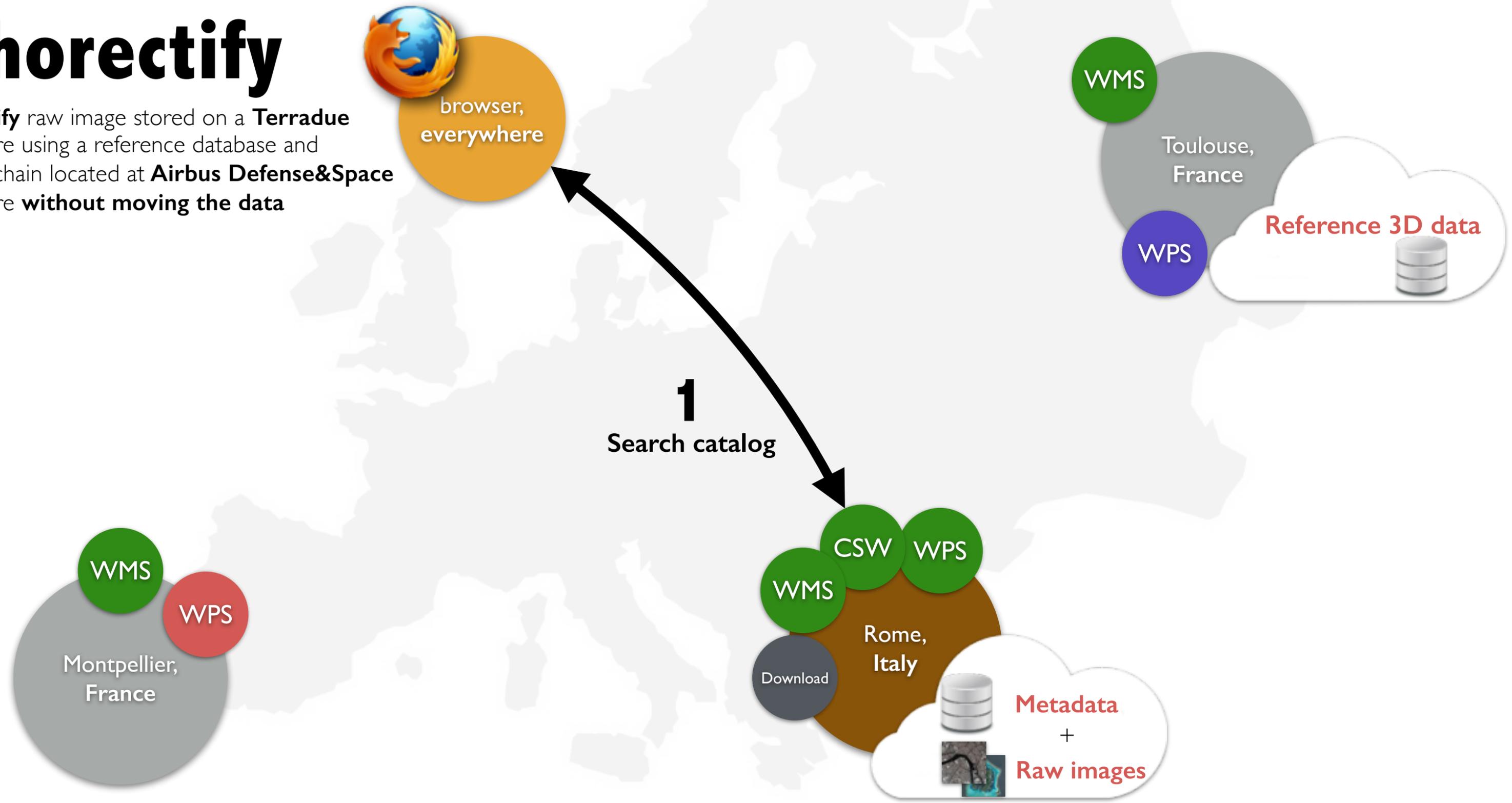
Web
Client

Architecture



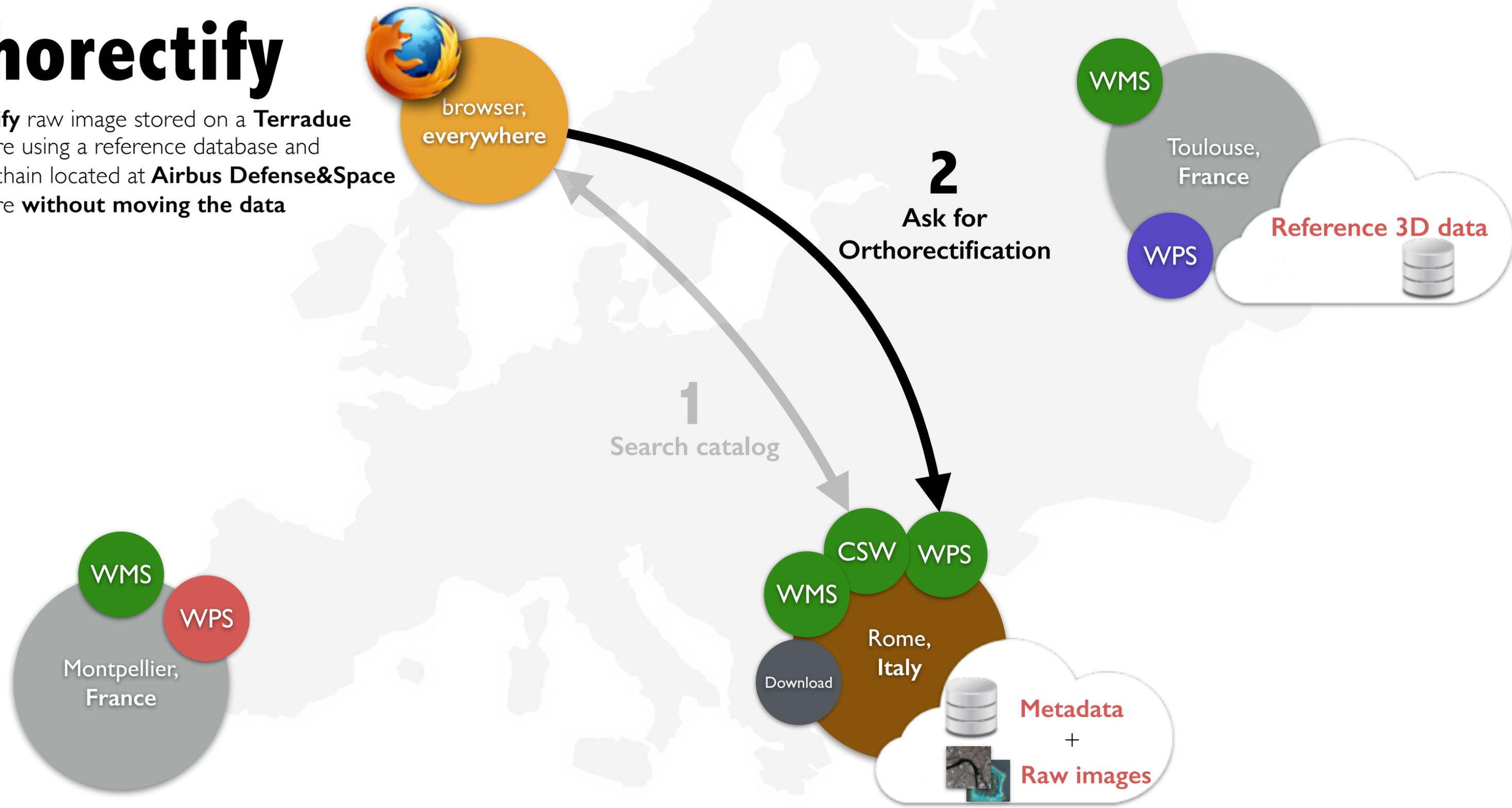
Orthorectify

Orthorectify raw image stored on a **Terradue** infrastructure using a reference database and processing chain located at **Airbus Defense&Space** infrastructure **without moving the data**



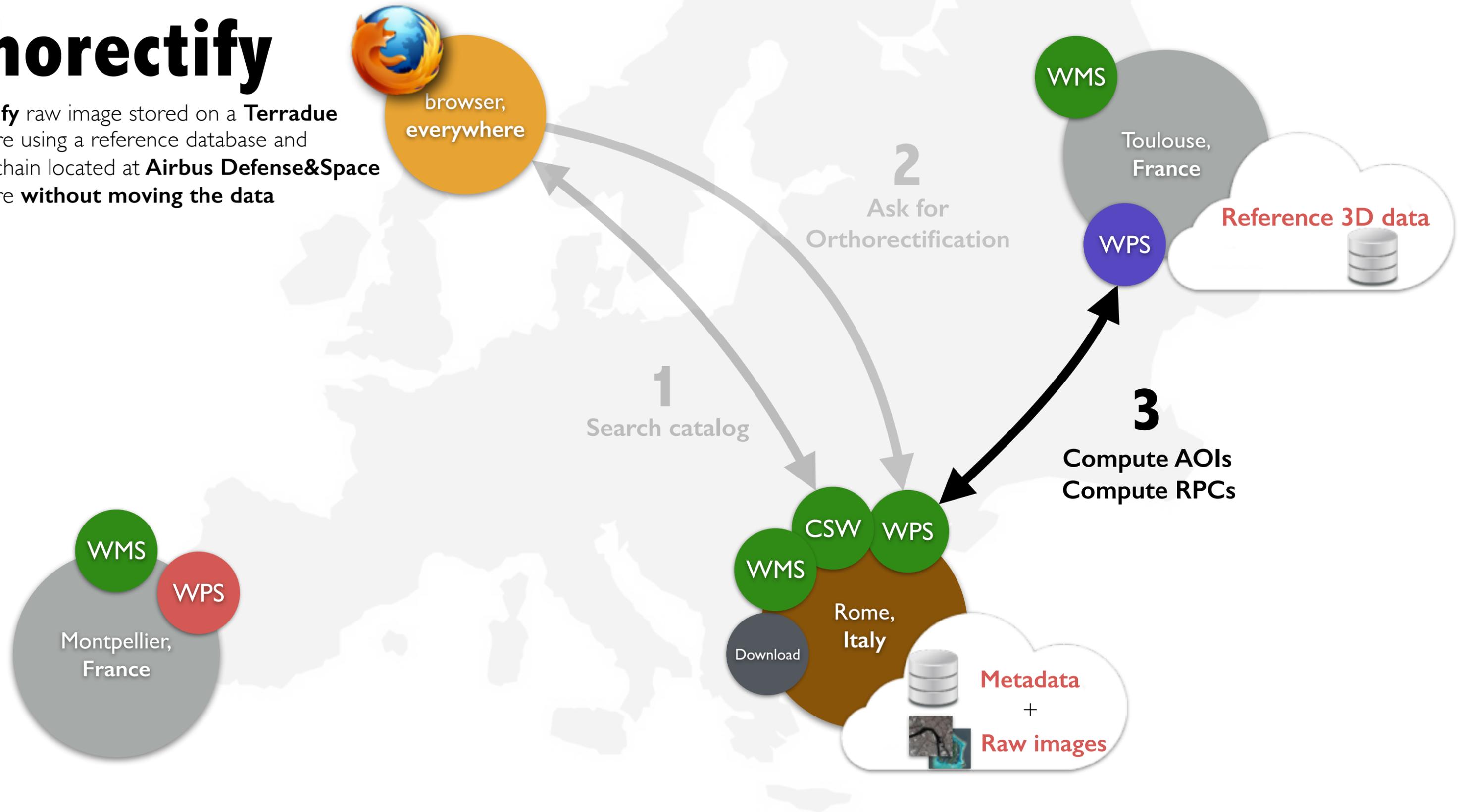
Orthorectify

Orthorectify raw image stored on a **Terradue** infrastructure using a reference database and processing chain located at **Airbus Defense&Space** infrastructure **without moving the data**



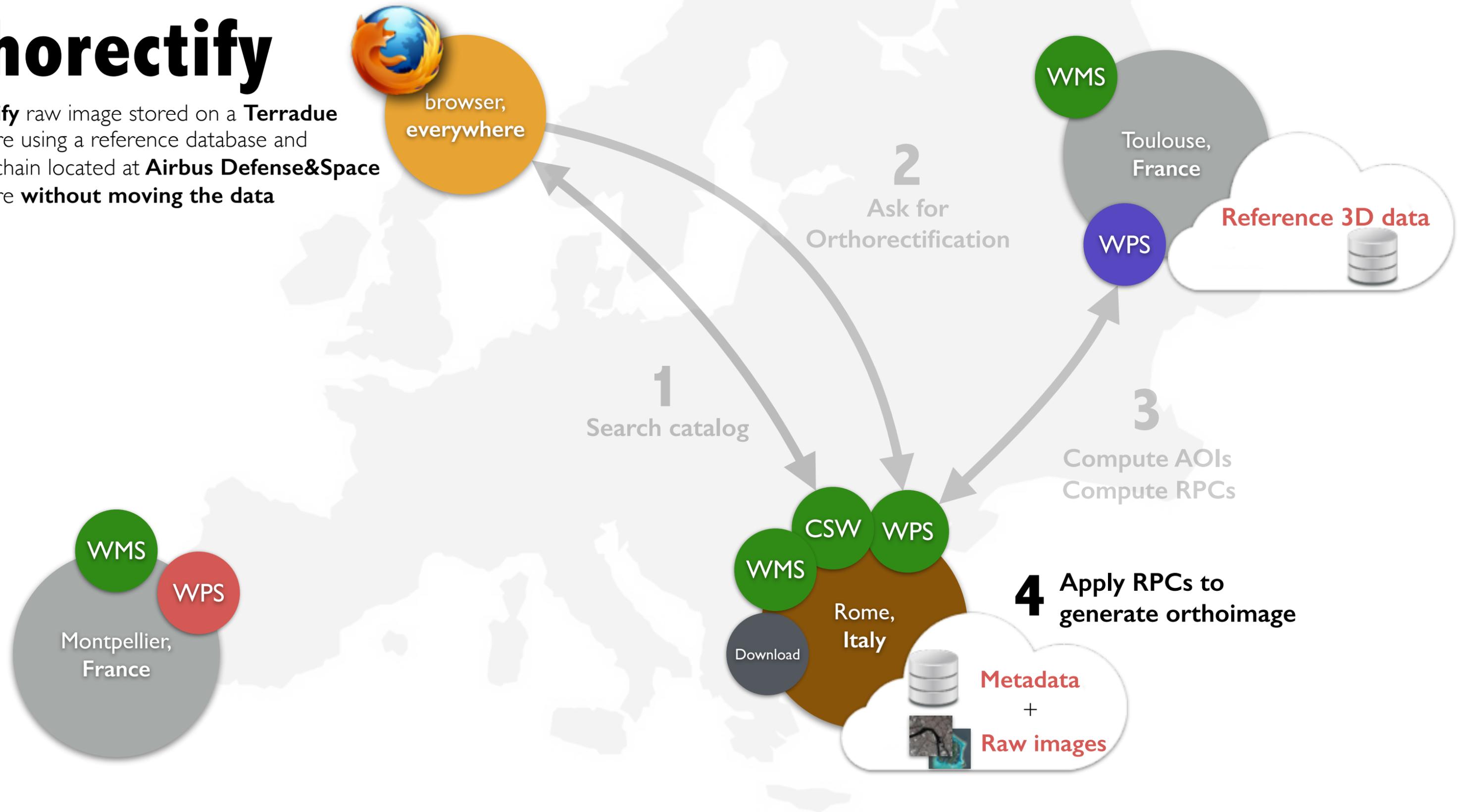
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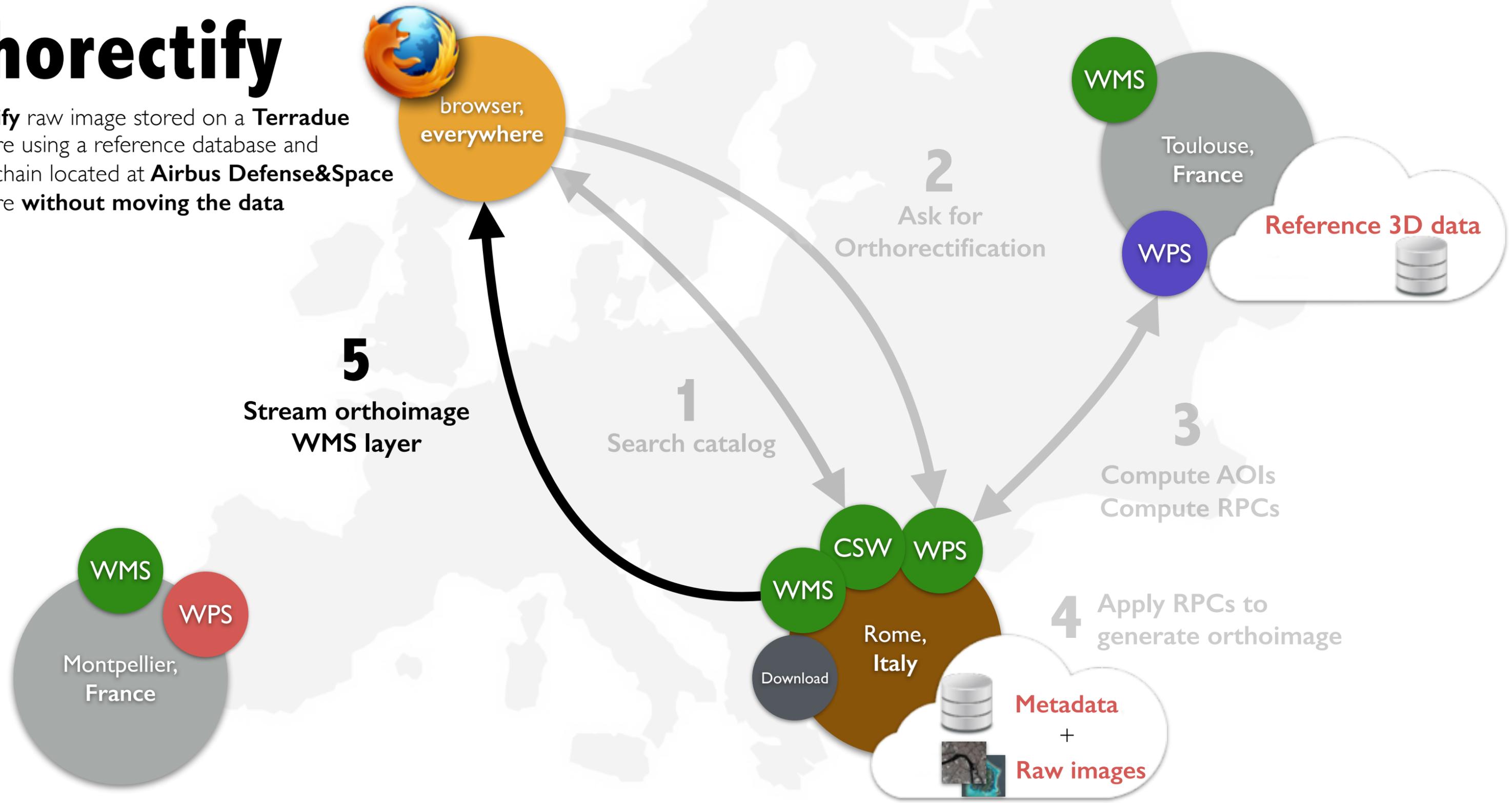
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Assess Quality

Assess quality of the orthorectified image stored on **Terradue** infrastructure using a reference database and processing chain located at **Airbus Defense&Space** infrastructure **without moving the data**



browser,
everywhere

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Assess orthoimage quality

WMS

Toulouse,
France

WPS

Reference 3D data



WMS

WPS

Montpellier,
France

WMS

CSW

WPS

Download

Rome,
Italy



Orthoimage



Metadata

+

Raw images

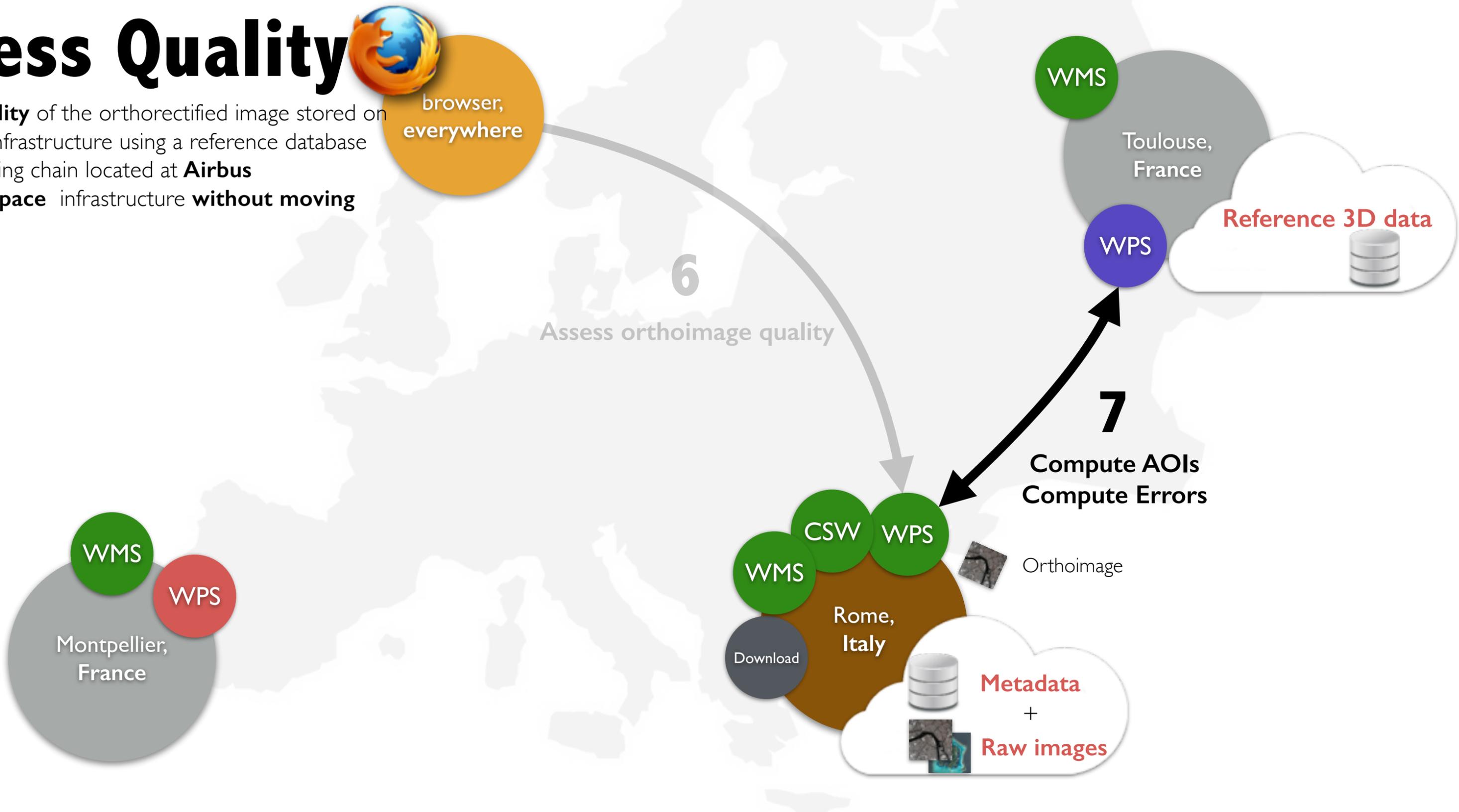


Assess Quality

Assess quality of the orthorectified image stored on **Terradue** infrastructure using a reference database and processing chain located at **Airbus Defense&Space** infrastructure **without moving the data**

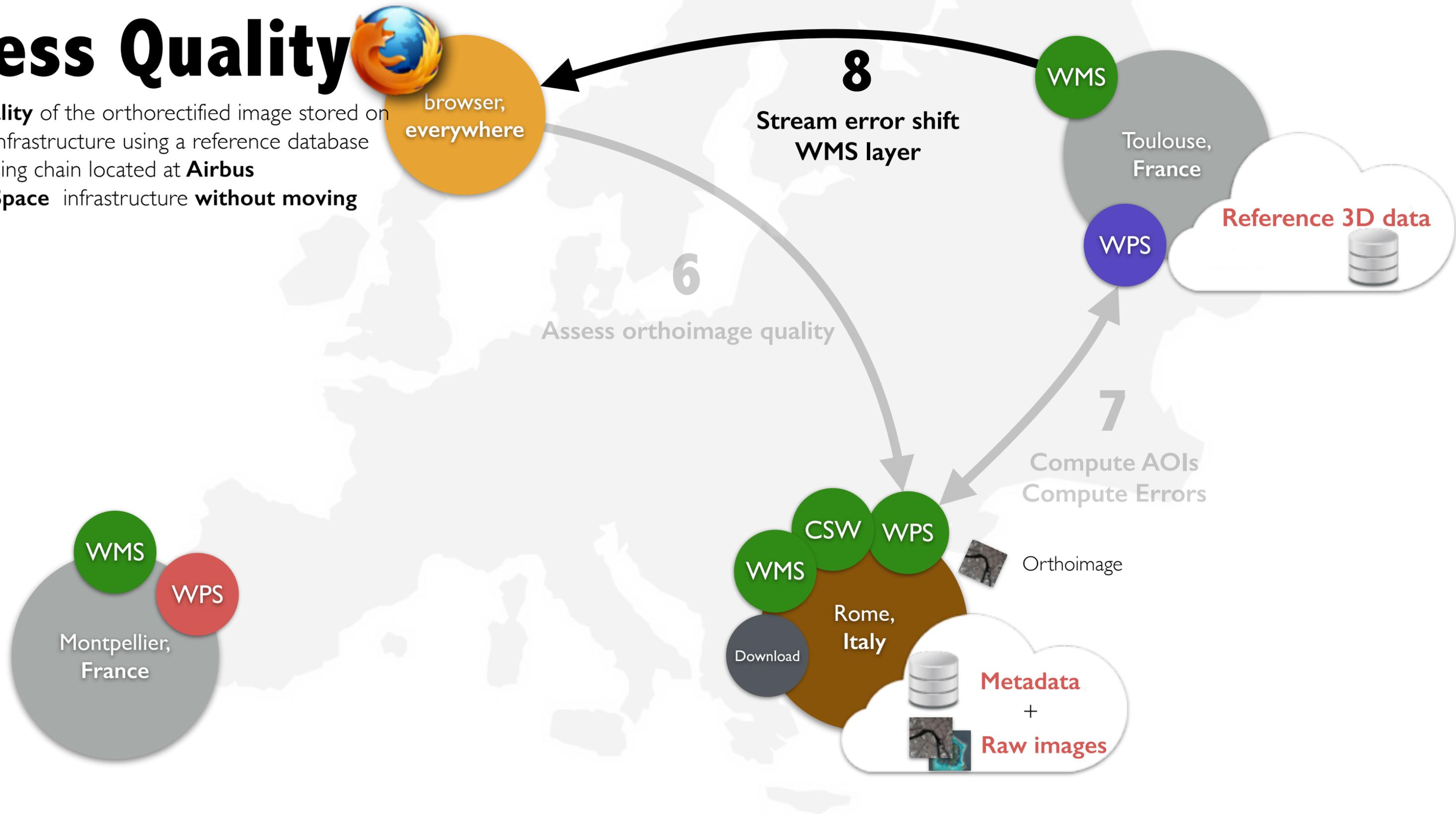


browser,
everywhere



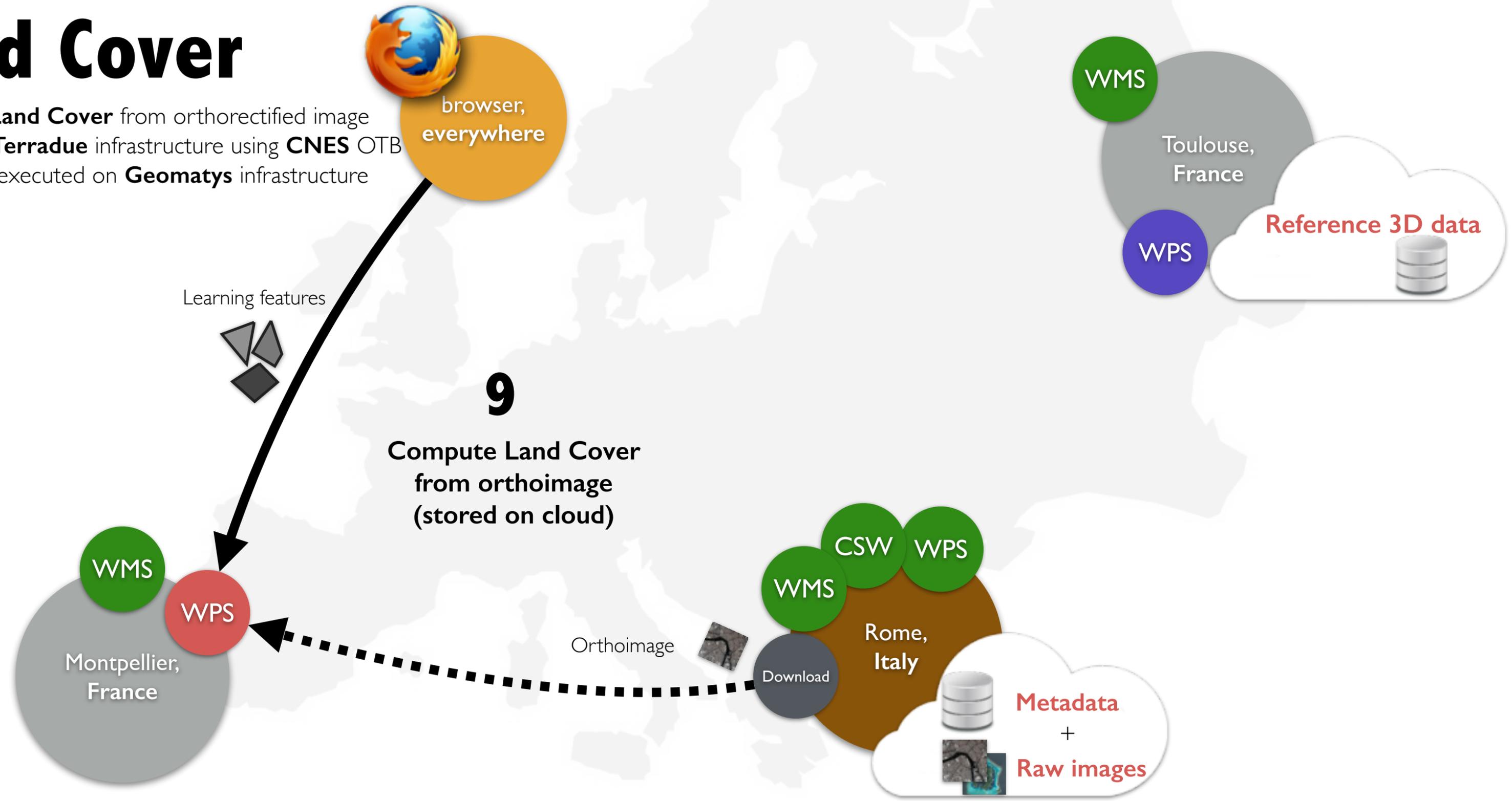
Assess Quality

Assess quality of the orthorectified image stored on **Terradue** infrastructure using a reference database and processing chain located at **Airbus Defense&Space** infrastructure **without moving the data**



Land Cover

Compute **Land Cover** from orthorectified image stored on **Terradue** infrastructure using **CNES** OTB processing executed on **Geomatys** infrastructure

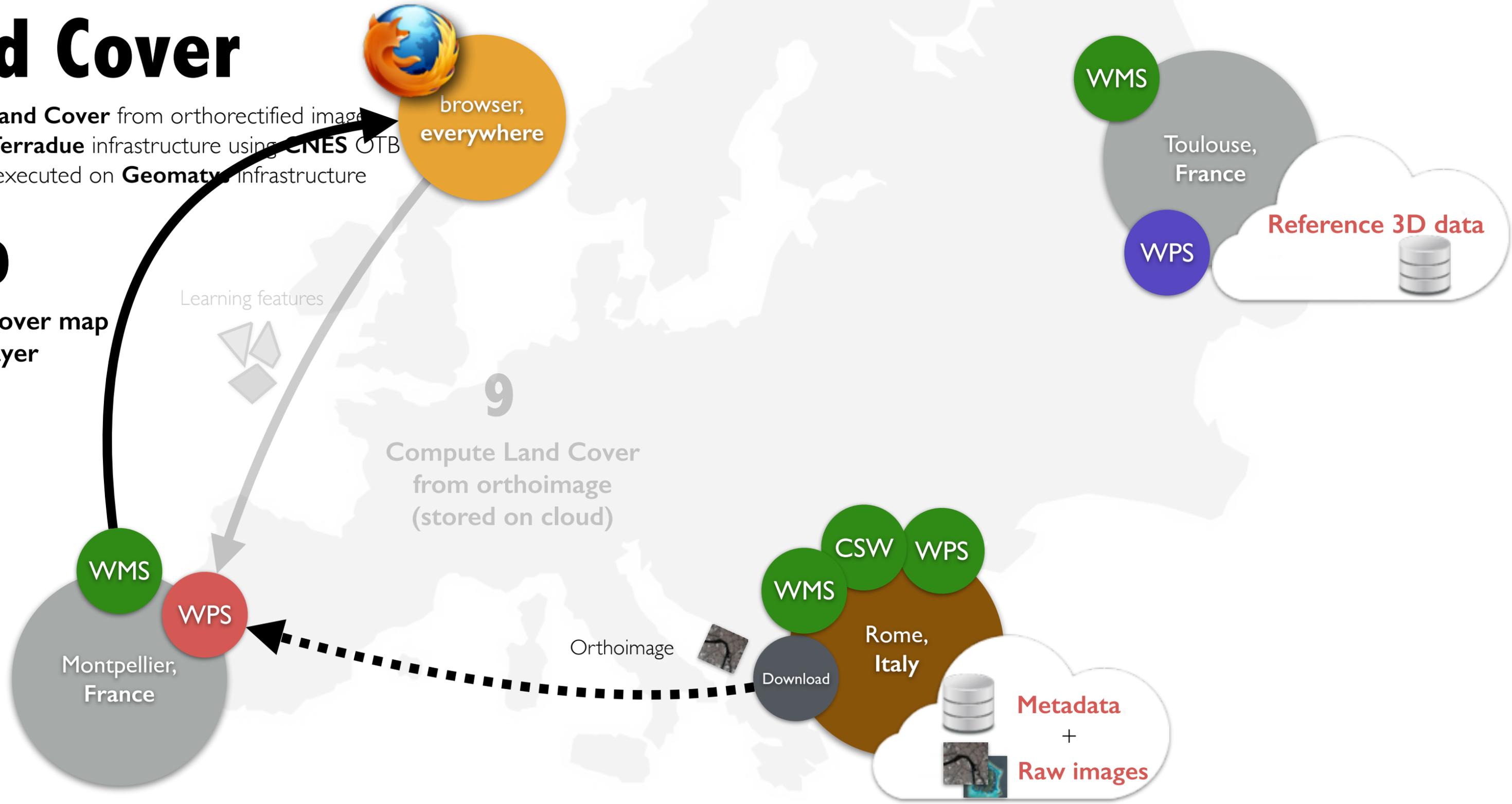


Land Cover

Compute **Land Cover** from orthorectified images stored on **Terradue** infrastructure using **CNES** OTB processing executed on **Geomatys** infrastructure

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Stream land cover map
WMS layer





<https://vimeo.com/90131217>